

CHAPTER FIVE

AH-1W SUPPLEMENTARY COURSES

UNCLASSIFIED//For Official Use Only

AH-1W SPECIFIC ACADEMIC SUPPORT PACKAGE

Course Objective: To provide the AH-1W pilot with additional ground training as required by MCO P3500.14G.

Length: 58 classroom hours

Notes:

1. The Academic Support Package (ASP) is developed by MAWTS-1 and intended for be instruction by a WTI or other qualified squadron instructor. The Academic Syllabus shall be integrated into the combat ready (31 hours of academic instruction), combat qualified (20 hours of academic instruction), fully combat qualified (7 hours of academic instruction) stages of training. Classes delineated in paragraph 9 shall be conducted annually for all pilots (15 hours of academic instruction).
2. All classes listed below in the academic syllabus are available on either the secret or unclassified versions of the MAWTS-1 ASP.

Academic Syllabus:

1. The following syllabus supports the 200-level (Combat Ready) phase of training:
 - a. In direct support of the DLQ Stage, the following academic syllabus shall be completed:
 - (1) Self-Paced Readings:
 - (a) NATOPS Chapters 8
 - (b) LHD/LHA NATOPS
 - (c) NWP 42
 - (2) Lectures: N/A
 - (3) Chalk Talks:
 - (a) FCLP Pattern
 - b. In direct support of the Terrain Flight Stage, the following academic syllabus shall be completed:
 - (1) Self-Paced Readings:
 - (a) AH-1W ANTTP Chapter 14
 - (b) AH-1W NATOPS Chapter 18, Sections 18.3-18.3.6

(c) HMT-303 Maneuver Description Guide, Chapters 6 and 7

(d) MAWTS-1 USN/USMC Helicopter NVD Manual, 6th Edition, Chapters 11 and 20

(e) AFTTP 3-1, Chapter 5, Section 5.5

(2) Lectures:

(a) **Prior to Stage Initiation:**

- | | |
|---|---------|
| 1. ASD Terrain Flight | ASD ASP |
| 2. ASD NVD Tactics in the Night Environment | ASD ASP |
| 3. ASD Tactical Aircrew Coordination | ASD ASP |

(b) **Prior to Stage Completion:**

- | | |
|----------------------|--------------------|
| 1. ASD IR SAM Threat | ASD CLASSIFIED ASP |
|----------------------|--------------------|

(3) Chalk Talks: N/A

c. In direct support of the Reconnaissance (REC) Stage, the following academic syllabus shall be completed:

(1) Self-Paced Readings:

- (a) AH-1W ANTTP Chapter 8
- (b) AH-1W NATIP Chapter 2
- (c) AFTTP 3-1 Chapter 4

(2) Lectures:

(a) **Prior to Stage Initiation:**

- | | |
|---------------------------------|-------------|
| 1. MAWTS-1 EOTDA | GENERIC ASP |
| 2. MAWTS-1 Air Reconnaissance | GENERIC ASP |
| 3. AH-1W Night Targeting System | AH-1W ASP |
| 4. AH-1W ALE-39 CBT | AH-1W ASP |

(b) **Prior to Stage Completion:**

- | | |
|-------------------|--------------------|
| 1. ASD AAA Threat | ASD CLASSIFIED ASP |
|-------------------|--------------------|

(3) Chalk Talks:

(c) Visual Reconnaissance Techniques

- d. In direct support of the Specific Weapons Delivery (SWD) Stage, the following academic syllabus shall be completed:

(1) Self-Paced Readings:

- (a) AH-1W ANTTP Chapter 2
- (b) AH-1W NATIP Chapter 1, App A, C, D
- (c) Joint Pub 3-09.1 (J-LASER)
- (d) Joint Pub 3-09.3 (Joint Tactics, Techniques, and Procedures for CAS)

(2) Lectures:

(a) **Prior to Stage Initiation:**

- | | |
|---------------------------|-----------|
| 1. AH-1W Weaponneering | AH-1W ASP |
| 2. AH-1W TOW | AH-1W ASP |
| 3. AH-1W AGM-114 Hellfire | AH-1W ASP |
| 4. AH-1W Rockets | AH-1W ASP |
| 5. AH-1W 20mm | AH-1W ASP |

(3) Chalk Talks:

(a) AH-1W Attack Patterns

- e. In direct support of the Escort (ESC) Stage, the following academic syllabus shall be completed:

(1) Self-Paced Readings:

- (a) AH-1W ANTTP Chapter 6
- (b) MAWTS-1 USN/USMC Helicopter NVD Manual, 6th Edition, Chapter 15

(2) Lectures:

(a) **Prior to Stage Initiation:**

- | | |
|---|----------------------|
| 1. ASD Tactical Briefing & Debriefing | ASD ASP |
| 2. MAWTS-1 Assault Support Escort Tactics | GENERIC ASP |
| 3. ASD Evasive Maneuvers | ASD CLASSIFIED ASP |
| 4. AH-1W AIM-9 | AH-1W CLASSIFIED ASP |
| 5. ASD Convoy Escort | ASD ASP |

(3) Chalk Talks:

(a) Escort Tactics

- f. In direct support of the Offensive Air Support Stage, the following academic syllabus shall be completed:

(1) Self-Paced Readings:

- (a) AH-1W ANTTP Chapters 1 and 4
- (b) MAWTS-1 MACCS Workbook (U), found on MAWTS-1 Generic ASP

(2) Lectures:

(a) **Prior to Stage Initiation:**

- 1. MAWTS-1 MAGTF FSCM WTI READ AHEAD
- 2. AH-1W RW OAS AH-1W ASP

(b) **Prior to Stage Completion:**

- 1. ASD Objective Area Planning and Briefing ASD ASP

(3) Chalk Talks:

(a) AH-1W Close Air Support Tactics

- g. In general support of the Combat Ready Phase, the following academic syllabus should be completed:

(1) Lectures:

- (a) ASD PFPS Operations ASD ASP
- (b) AH-1W HAVEQUICK/SINCGARS AH-1W ASP
- (c) AH-1W EGI Operations AH-1W ASP
- (d) MAWTS-1 Intelligence Support to Mission Planners GENERIC CLASSIFIED ASP
- (e) MAWTS-1 Radio Electronic Combat GENERIC CLASSIFIED ASP
- (f) AH-1W FARP/RGR Operations AH-1W ASP

2. The following syllabus supports the 300-level (Combat Qualified) phase of training:

- a. In direct support of the Electronic Warfare (EW) Stage, the following academic syllabus shall be completed:

(1) Self-Paced Readings:

- (a) AH-1W ANTTP Chapter 10
- (b) AH-1W NATIP Chapter 3
- (c) AH-1W SECRET NATIP Chapters 2, 3
- (d) AFTTP 3-1 Chapter 5, Sections 5.1-5.4, and 5.6
- (e) AH-1W NATOPS Chapter 22
- (f) MAWTS-1 Basic Radar Principles (U) MAWTS-1 WTI Course Mail Ahead, found on Generic ASP

(2) Lectures:

(a) **Prior to Stage Initiation:**

- 1. AH-1W ASE AH-1W CLASSIFIED ASP

(b) **Prior to Stage Completion:**

- 1. MAWTS-1 EA-6B & MAGTF Operations GENERIC CLASSIFIED ASP
- 2. ASD Radar SAM Threat ASD CLASSIFIED ASP

- b. In direct support of the Advanced Night Systems Qualification (ANSQ) Stage, the following academic syllabus shall be completed:

(1) Self-Paced Readings:

- (a) MAWTS-1 USN/USMC Helicopter NVD Manual, 6th Edition, Chapters 13, 16, and 19
- (b) AH-1W ANTTP Chapters 3, 7
- (c) T&R Admin, p. 5-9, para 503 #1 - p. 5-14, para 502 #3

(2) Lectures:

(a) **Prior to Stage Completion:**

- 1. MAWTS-1 Tactical Recovery of Aircraft GENERIC ASP
and Personnel (TRAP)
- 2. ASD Rapid Response Planning ASD ASP

- c. In direct support of the Offensive Air Support (OAS) Stage, the following academic syllabus shall be completed:

(1) Self-Paced Readings:

- (a) MAWTS-1 NVD Manual Chapter 13
- (b) AH-1W ANTTP Chapters 15, 16, App A, B

(2) Lectures:

(a) **Prior to Stage Initiation:**

1. MAWTS-1 ROE & Law of War

GENERIC CLASSIFIED ASP

(b) **Prior to Stage Completion:**

1. ASD Fixed Wing Threat

ASD CLASSIFIED ASP

- d. In direct support of the DLQ Stage, the following academic syllabus shall be completed:

(1) Self-Paced Readings:

- (a) NATOPS Chapters 8
- (b) LHD/LHA NATOPS
- (c) NWP 42

(2) Lectures: N/A

(3) Chalk Talks:

- (a) CQ Patterns
- (b) ELVA Approaches

- e. In direct support of the Forward Air Controller (Airborne) (FAC(A)) Stage, the following academic syllabus shall be completed:

(1) Self-Paced Readings:

- (a) AH-1W ANTTP Chapter 9
- (b) AH-1W NATIP App B, E
- (c) MAWTS-1 FAC(A) Handbook
- (d) Joint Pub 3-09.3 (Joint Tactics, Techniques, and Procedures for Close Air Support), Chapters II and III, and Appendix E

(2) Lectures:

(a) **Prior to Stage Initiation:**

1. FAC(A) Call for Fire FAC(A) ASP
1. FAC(A) NSFS Call for Fire FAC(A) ASP
2. FAC(A) Basics FAC(A) ASP
3. FAC(A) Helicopter Low Threat TTPs FAC(A) ASP
5. FAC(A) Helicopter Med/Hi Threat TTPs FAC(A) ASP

6. MAWTS-1 MAGTF Targeting and Fire Support Planning **GENERIC ASP**

(b) Prior to Stage Completion:

1. FAC(A) OAS PGMs **FAC(A) ASP**
2. FAC(A) FW/RW OAS Integration **FAC(A) ASP**
3. FAC(A) Planning and Preparation **FAC(A) ASP**
4. FAC(A) and TAC(A) Employment **FAC(A) ASP**
5. FAC(A) Night Helicopter TTPs **FAC(A) ASP**

(3) Chalk Talks:

(a) FAC(A) Procedures and Execution

- f. In general support of the Combat Qualified Phase, the following academic syllabus should be completed:

(1) Lectures:

- (a) MAWTS-1 Electronic Warfare **WTI READ AHEAD**
- (b) MAWTS-1 Control of Aircraft and Missiles **WTI READ AHEAD**
- (c) MAWTS-1 Marine Corps Planning Process **GENERIC ASP**
- (d) ASD Laser Threat **ASD CLASSIFIED ASP**
- (e) ASD Attack Helicopter Threat **ASD CLASSIFIED ASP**
- (f) ASD Helicopter Assault Key Players **ASD ASP**

3. The following syllabus supports the 400-level (Full Combat Qualified) phase of training:

- a. In direct support of the OAS Stage, the following academic syllabus shall be completed:

(1) Lectures:

(a) Prior to Stage Initiation:

1. ASD Military Operations in Urban Terrain (MOUT) **ASD ASP**
2. ASD Urban Close Air Support **ASD ASP**

(b) Prior to Stage Completion:

1. ASD OAS Fixed Wing-Rotary Wing Integration **ASD ASP**
2. ASD Execution Checklist **ASD ASP**

(2) Chalk Talks:

(a) AH-1W Deep Air Support Tactics

- b. In direct support of the Rotary Wing Defensive Air Combat Maneuvering (DACM) Stage, the following academic syllabus shall be completed:

(1) Self-Paced Readings:

- (a) MAWTS-1 AH-1W DACM Guide, Chapters 1 and 2, Appendices A, B, D, E
- (b) AH-1W ANTTP Chapters 11-13
- (c) AH-1W Secret ANTTP Chapters 1, 3
- (d) AH-1W NATIP Chapter 5
- (e) AH-1W Secret NATIP Chapters 1, 5
- (f) AFTTP 3-1, Chapter 8

(2) Lectures:

(a) **Prior to Stage Initiation:**

- 1. AH-1W DACM Planning Considerations AH-1W ASP
- 2. AH-1W DACM AH-1W ASP

(b) **Prior to Stage Completion:**

- 1. MAWTS-1 RW Threat to the MAGTF GENERIC CLASSIFIED ASP

(3) Chalk Talks:

(a) AH-1W RW DACM Gameplan

- d. In direct support of the Fixed Wing Defensive Air Combat Maneuvering (DACM) Stage, the following academic syllabus shall be completed:

(1) Self-Paced Readings:

- (a) AH-1W NATIP Chapter 4
- (b) AH-1W Secret ANTTP Chapter 2
- (c) MAWTS-1 AH-1W DACM Guide, Chapters 3 and 4
- (d) AFTTP 3-1, Chapter 6 (tailored by Squadron AH-1W DACMI for current threat systems)

(2) Lectures:

(a) Prior to Stage Completion:

1. MAWTS-1 FW Threat to the MAGTF **GENERIC CLASSIFIED ASP**

(3) Chalk Talks:

- (a) AH-1W FW DACM Gameplan

- e. In general support of the Full Combat Qualified Phase, the following academic syllabus should be completed:

(1) Self-Paced Readings:

- (a) AH-1W ANTTP Chapter 5
- (b) AH-1W Secret ANTTP Chapter 4
- (c) AH-1W Secret NATIP Chapter 4

(2) Lectures:

- (a) MAWTS-1 Anti-air Warfare **WTI READ AHEAD**
- (b) MAWTS-1 Airborne Early Warning **GENERIC ASP**
- (c) MAWTS-1 ACE Battle Staff Planning & Briefing **GENERIC ASP**
- (d) AH-1W Emergency Defense of the Amphibious Task Force (EDATF) **GENERIC ASP**

3. The following syllabus supports the 500-level (Instructor Training) phase of training:

- a. In direct support of the Basic Instructor Pilot (BIP) Stage, the following academic syllabus shall be completed:

(1) Self-Paced Readings:

- (a) AH-1W NATOPS 1,2,4,5,7,9,11; Part V
- (b) HMT-303 AH-1W Maneuver Description Guide, Chapters 1-5

(2) Lectures: N/A

(3) Chalk-talks:

- (a) Instructional Techniques

- b. In direct support of the Terrain Flight Instructor (TERFI) Stage, the following academic syllabus shall be completed:

(1) Self-Paced Readings:

- (a) AH-1W ANTTP Chapter 14
- (b) AH-1W NATOPS Chapter 18, Sections 18.3-18.3.6
- (c) HMT-303 Maneuver Description Guide, Chapters 6 and 7
- (d) MAWTS-1 USN/USMC Helicopter NVD Manual, 6th Edition, Chapters 11 and 20

(2) Lectures:

- (a) The TERFIUT shall review and be capable of presenting the following lectures:

- 1. ASD Terrain Flight ASD ASP
- 2. ASD NVD Tactics in the Night Environment ASD ASP
- 3. ASD Tactical Aircrew Coordination ASD ASP

- c. In direct support of the Weapons Training Officer (WTO) Stage, the following academic syllabus shall be completed:

(1) Self-Paced Readings:

- (a) AH-1W ANTTP Chapters 1, 2
- (b) AH-1W NATIP Chapters 1, 3 App A, B, C, D
- (c) AH-1W NATOPS Part VIII
- (d) HMT-303 AH-1W Maneuver Description Guide, Chapter 8

(2) Lectures:

- (a) The WTO IUT shall review and be capable of presenting the following lectures:

- 1. AH-1W TOW AH-1W ASP
- 2. AH-1W AGM-114 Hellfire AH-1W ASP
- 3. AH-1W Rockets AH-1W ASP
- 4. AH-1W 20mm AH-1W ASP

4. The following syllabus shall be completed in support of Attack Helicopter Commander training:

a. Lectures:

(1) **Prior to Designation:**

- | | |
|---|-------------|
| (a) MAWTS-1 Aviation in Support of MAGTF Operations | GENERIC ASP |
| (b) ASD NEO Execution | ASD ASP |
| (c) MAWTS-1 Joint Air Operations | GENERIC ASP |

5. The following syllabus shall be completed in support of Section Leader training:

a. Self-Paced Readings:

(1) MCWP 5-1 *Marine Corps Planning Process*

- b. Lectures: **Prior to designation**, review all previously introduced lectures, placing special emphasis on the following:

- | | |
|--|------------------------|
| (1) MAWTS-1 Marine Corps Planning Process | GENERIC ASP |
| (2) MAWTS-1 MAGTF Fire Support Coordination Measures | WTI READ AHEAD |
| (3) MAWTS-1 Intelligence Support to Mission Planners | GENERIC CLASSIFIED ASP |
| (4) ASD Tactical Briefing and Debriefing | ASD ASP |

c. Chalk Talks: N/A

6. The following syllabus shall be completed in support of Division Leader training:

a. Self-Paced Readings:

(1) MAWTS-1 *ACE Battle Staff Planning Guide*

- b. Lectures: **Prior to designation**, review all previously introduced lectures, placing special emphasis on the following:

- | | |
|--|------------------------|
| (1) MAWTS-1 ACE Battle Staff Planning | GENERIC ASP |
| (2) MAWTS-1 ROE and the Laws of War | GENERIC CLASSIFIED ASP |
| (3) MAWTS-1 Aviation Support to the MAGTF | GENERIC ASP |
| (4) ASD Objective Area Planning & Briefing | ASD ASP |

c. Chalk Talks:

(1) Division Attack Patterns

7. The following syllabus shall be completed in support of Flight Leader training:

a. Self-Paced Readings:

(1) MAWTS-1/TTECG *How to Plan a Helicopter Assault*

b. Lectures: **Prior to designation**, review all previously introduced lectures, placing special emphasis on the following:

(1) MAWTS-1 Joint Air Operations
(2) ASD NEO Execution

GENERIC ASP
ASD ASP

c. Chalk Talks: N/A

9. The following classes should be presented to all pilots annually:

a. ASD Tactical Aircrew Coordination	ASD ASP
b. AH-1W Night Targeting System	AH-1W ASP
c. AH-1W Basic Conventional Weapons Delivery	AH-1W ASP
d. MAWTS-1 Assault Support Escort Tactics	GENERIC ASP
e. AH-1W RW OAS	AH-1W ASP
f. FAC(A) R/W Planning & Preparation	FAC(A) ASP
g. AH-1W ASE	AH-1W CLASSIFIED ASP
h. ASD Urban CAS	ASD ASP
i. ASD OAS Fixed Wing-Rotary Wing Integration	ASD ASP
j. AH-1W DACM Planning Considerations	AH-1W ASP
k. ASD AAA Threat	ASD CLASSIFIED ASP
l. ASD Radar SAM Threat	ASD CLASSIFIED ASP
m. ASD IR SAM Threat	ASD CLASSIFIED ASP
n. ASD Objective Area Planning and Briefing	ASD ASP

AH-1W FORWARD AIR CONTROLLER (AIRBORNE) INSTRUCTOR [FAC(A) I] CERTIFICATION COURSE

Course Objective: To certify the AH-1W pilot as a Forward Air Controller (Airborne) Instructor capable of conducting ground and airborne instruction of FAC(A) missions. Emphasis will be placed on the ability to coordinate simultaneous FW and RW CAS, and surface fires (direct and indirect), while working with a TACP and operating within the MACCS.

Length: IUT: 9 classroom hours, 1 sortie.
Cert: 1 hour class presentation, 1 hour discussion period, 1 hour test and 1 sortie.

Notes:

1. The FAC(A) I certification course is developed by MAWTS-1. The IUT portion is designed to be instructed by a FAC(A) I or MAWTS-1 instructor. Upon certification by a MAWTS-1 instructor, the FAC(A) I designation may be made at the discretion of the squadron commander.
2. AH-1W pilots designated as a FAC(A) I may instruct MCO 3500.48 (T&R Vol III) FAC(A) syllabus flights.
3. Experience has shown that a FAC(A) must develop additional experience to meet the standards for successful completion of the FAC(A)I Certification, therefore MAWTS-1 recommends a minimum of (4) FAC(A) sorties be completed before a pilot commences the FAC(A)I IUT syllabus.
4. The academic syllabus will be completed prior to beginning the flight syllabus in any stage.

Prerequisites:

1. FAC(A) qualified IAW MCO P3500.48.
2. Designated Weapons Training Officer (WTO).
3. Designated Section Leader.
4. NSQ LLL and proficient IAW MCO P3500.14G and P3500.48

IUT STAGE**IUT Academic Syllabus:**

1. The IUT shall review and be capable of presenting the following classes from the MAWTS-1 ASP:

a. FAC(A) Artillery, Call for Fire	FAC(A) ASP
b. FAC(A) Naval Gunfire, Call for Fire	FAC(A) ASP
c. FAC(A) Planning and Preparation	FAC(A) ASP
d. FAC(A) Employment	FAC(A) ASP
e. FAC(A) and TAC(A) Employment	FAC(A) ASP
f. MAWTS-1 MAGTF FSCM	FAC(A) ASP
g. MAWTS-1 Targeting and Fire Support Planning	FAC(A) ASP
h. FAC(A) Theatre Air Ground Systems	FAC(A) ASP
i. FAC(A) MACCS Parts 1&2	FAC(A) ASP
j. FAC(A) Field Artillery Trends	FAC(A) ASP
k. FAC(A) NSFS Capabilities	FAC(A) ASP
l. FAC(A) Helicopter Low Threat TTPs	FAC(A) ASP
m. FAC(A) Helicopter Medium/High Threat TTPs	FAC(A) ASP
n. FAC(A) Helicopter Night FAC(A) TTPs	FAC(A) ASP

2. The IUT shall review and have proficient working knowledge of the following:
 - a. AH-1W Unclassified ANTTP CH 9
 - b. MCWP 3-23 (OAS)
 - c. MCWP 3-23.1 (CAS)
 - d. MCWP 3-23.2 (DAS)
 - e. MCWP 3-16.6 (Supporting Arms Observer, Spotter and Controller)
 - f. Joint Pub 3-09.3 (J-CAS)
 - g. Joint Pub 3-09.1 (J-LASER)
 - h. MCRP 3-16.8 B (J-FIRE)
 - i. MCRP 3-23A (JAAT)
 - j. MAWTS-1 Course Catalog (Chap 5, FAC(A) I section)
 - k. Joint Division Order P3120.23 (FSC SOP)

IUT Flight Syllabus:

1. The syllabus consists of one (1) flight, FAC (A)I 540.
2. The IUT shall plan, brief, lead, debrief and demonstrate the ability to instruct and conduct tactical FAC(A) missions under all threat conditions, day or night.
3. The IUT shall demonstrate proficiency in performing visual reconnaissance and coordinating indirect fires in all threat conditions, day or night.

4. The IUT sortie **or** the Certification sortie must be flown at **night**.
5. The IUT sortie must utilize both TACP and MACCS agencies (actual or notional).
6. Actual indirect fires must be employed for either the 540 **or** the 541E sortie.
7. During the conduct of the 541E sortie, the IUT must demonstrate the ability to support a ground unit's (notional or actual) scheme of maneuver by integrating assets and fires in the objective area utilizing a combination of FW assets and either indirect fires or a section of RW CAS (separate from the FAC(A) section). If actual indirect fires were not employed during the 540 sortie, they **must** be utilized for the 541E.

FAC(A) I 540 (2) AH-1Ws N (optional if 541 flown at night)

Goal: To evaluate the IUTs ability to instruct a FAC(A) mission utilizing combined CAS procedures in a low or medium threat environment.

Requirements:

1. The IUT shall fly this sortie in an NTS/1686 equipped aircraft.
2. The IUT shall analyze the mission based on a pre-briefed GCE scenario, threat, weather, control measures, C3 network, and CAS aircraft capabilities and tactics.
3. The IUT shall brief and employ a FAC(A) section gameplan to support the GCE scheme of maneuver.
4. The IUT shall check-in with a TACP / FAC (actual or notional) for enemy and friendly situation briefs, indirect fire considerations, terminal control responsibilities, and restrictions. The IUT shall then develop a course of action based on the information provided.
5. The IUT shall perform visual reconnaissance of two (2) targets and prepare target briefs. The IUT shall successfully engage both targets with FW and either indirect fires or his own section of aircraft utilizing JAAT principles and standard J-CAS briefing format and control procedures. Talk-ons shall be used as appropriate to supplement the J-CAS brief. A minimum of two (2) separate and distinct attacks is required.
6. The IUT shall demonstrate the ability to successfully provide a mark thirty (30) seconds prior (+/- 10 secs) to the TOT and be able to provide timely, accurate corrections for the attack aircraft.

Ordinance: Any combination of self-protection and target marking capability.

External Support Requirements: Two (2) or more FW aircraft with ordnance; indirect fire support optional.

CERTIFICATION STAGE

Certification Academic Syllabus

1. Prior to the certification flight, the IUT shall present to a MAWTS-1 instructor, one of the classes listed in paragraph one of the IUT academic syllabus. The actual classes to be presented shall be determined by the MAWTS-1 instructor.
2. A MAWTS-1 instructor will administer the written examination. The minimum passing grade for the exam is 80%. In the event of an exam failure, the certification will be terminated and another attempt will not be allowed for at least one month. The exam will be computer generated from the AH-1W FAC(A)I question bank which utilizes the references listed in paragraph 2 of the FAC(A)I IUT academic syllabus.
3. The IUT shall complete a one hour discussion period, prior to the certification flight.

Certification Flight Syllabus

1. This syllabus consists of one (1) sortie, FAC(A) I 541E.
2. The IUT shall plan, brief, lead, debrief and demonstrate the ability to instruct and conduct tactical FAC(A) missions under high threat conditions, day or night.
3. The certification flight must be flown with a MAWTS-1 Instructor.
4. The certification flight must be flown within 6 months of the IUT flight. If 6 months have elapsed since the completion of the IUT flight, the IUT flight must be re-flown prior to completing the certification flight.
5. The certification sortie must utilize both TACP and MACCS agencies (actual or notional).
6. The certification sortie must utilize indirect fire support (required if not utilized during the conduct of the 540 sortie) or a separate RW CAS element.

FAC(A) I 541E (2) AH-1Ws N (optional if 540 flown at night)

Goal: To evaluate the IUTs ability to instruct a FAC(A) mission utilizing SEAD and CAS procedures in a high threat environment.

Requirements:

1. The IUT shall fly this sortie in an NTS/1686 equipped aircraft.
2. The IUT shall analyze the mission based on a pre-briefed GCE scenario, threat, weather, control measures, C3 network, and CAS aircraft capabilities and tactics.
3. The IUT shall brief and employ a FAC(A) section gameplan to support the GCE scheme of maneuver.
4. The IUT shall check-in with a TACP / FAC (actual or notional) for enemy and friendly situation briefs, indirect fire considerations, terminal control responsibilities, and restrictions. The IUT shall then develop a course of action based on the information provided.
5. The IUT shall perform visual reconnaissance of two (2) targets and prepare target briefs. The IUT shall successfully engage both targets with FW, indirect fires or another element of RW CAS, and his own section of aircraft utilizing JAAT principles and standard J-CAS briefing format and control procedures. Talk-ons will be used as appropriate to supplement the J-CAS brief. A minimum of two (2) separate and distinct attacks are required.
6. The IUT shall demonstrate the ability to successfully provide a mark thirty (30) seconds prior (+/- 10 secs) to the TOT and be able to provide timely, accurate corrections for the attack aircraft.
7. Utilizing appropriate tactics, the IUT shall coordinate attacks utilizing fixed wing aircraft and either indirect fires or a separate rotary wing CAS element to simultaneously engage simulated threat targets.

Ordinance: Any combination of self-protection and target marking capability.

External Support Requirements: Two (2) or more FW aircraft with ordnance; indirect fire support (required if not used on 540) or two (2) or more RW aircraft with ordnance.

RECERTIFICATION REQUIREMENTS

Refresher / Transition / Conversion:

1. The IUT must meet all prerequisites.
2. A MAWT-1 Instructor will administer a written examination. The minimum passing grade for the exam is 80%. In the event of an exam failure, the certification will be terminated and another attempt will not be allowed for at least one month. The exam will be computer generated from the AH-1W FAC(A)I question bank which utilizes the references listed in paragraph 2 of the

FAC(A)I IUT academic syllabus.

3. The IUT must complete FAC(A) I 541 evaluated by a MAWTS-1 instructor. This flight may be flown day or night.
4. The recertification sortie must utilize both TACP and MACCS agencies (actual or notional), in support of a GCE SOM (actual or notional).
5. The recertification sortie must utilize indirect fire support or a separate RW CAS element in addition to a FW CAS.

AH-1W NIGHT SYSTEMS FAMILIARIZATION INSTRUCTOR (NSFI) CERTIFICATION COURSE

Course Objective: To certify an AH-1W pilot as a Night Systems Familiarization Instructor (NSFI) capable of safely conducting ground and airborne instruction of night vision device (NVD) flight during the combat capable flight phase.

Length: IUT: 5 classroom hours and 2 sorties.
Cert: 1 hour NSFI test, 1 hour class presentation and 1 sortie.

Notes:

1. The AH-1W NSFI Course is developed by MAWTS-1 and supports the certification of NSFIs for fleet replacement squadrons only. The IUT portion is designed to be taught by a night systems instructor (NSI), NSFI, or MAWTS-1 instructor. Upon certification by an NSI or MAWTS-1 instructor the NSFI designation may be made at the discretion of the commanding officer.
2. Previously certified AH-1W NSIs, not requiring refresher training, can be designated as an NSFI at the discretion of the commanding officer.
3. Night systems familiarization training is defined as basic night vision device orientation and use. Flight operations include all maneuvers contained within the combat capable flight phase.
4. The academic syllabus shall be completed prior to beginning the flight syllabus of any stage.

Prerequisites:

1. Night systems qualified (NSQ) HLL and proficient in accordance with MCO P3500.14G and MCO P3500.48.
2. Designated TERF Instructor.

IUT Stage

IUT Academic Syllabus:

1. The instructor under training (IUT) shall review and be capable of presenting the following classes:
 - a. NITE LAB Night Vision Systems NITE LAB ASP
 - b. NITE LAB Night System Human Factors NITE LAB ASP

- c. NITE LAB Tactics in the Night Environment NITE LAB ASP
- d. NITE LAB Night Environment NITE LAB ASP

2. The IUT shall review and have a proficient working knowledge of the MAWTS-1 NVD manual.

IUT Flight Syllabus:

1. The squadron shall ensure that the IUT is prepared for certification. The certification stage must be complete within six (6) months following the first IUT flight. If six months have elapsed since completion of any IUT flight, that flight must be reflight prior to completing the certification flight.
2. The following flights shall be instructed by an NSI, NSFI, or MAWTS-1 instructor:

NVD 560	2 AH-1W	N
---------	---------	---

Goal: Conduct section formation flight under High Light Level (HLL) conditions as defined by MCO 3500.14 emphasizing instructional techniques.

Requirements:

1. Brief/discuss NVD formation flight considerations and techniques.
2. Brief/discuss aircraft emergencies and NVD failures encountered during formation flight.
3. Introduce and conduct section formation flight in parade and cruise profiles transitioning from unaided to aided flight (parade aided only).
4. Introduce and conduct low work, pattern work, and simulated emergencies with emphasis on instructional techniques.

Ordinance: N/A

External Support Requirements: N/A

NVD 561	2 AH-1W	N
---------	---------	---

Goal: Conduct basic navigation and TERF maneuvers utilizing NVDs under High Light Level (HLL) conditions as defined by MCO P3500.14G.

Requirements:

1. Brief/discuss NVG map preparation, NVG route cards, checkpoint identification, inadvertent IMC, en route hazards, moon angle/azimuth and shadowing.

2. Brief/discuss NVD TERF considerations, NVG HUD usage and FLIR utilization during TERF/TERF-NAV.
3. Conduct NVD TERF maneuvers.
4. Conduct NVD Low Level navigation utilizing a 1:250,000 map. Transition to contour and NOE profiles utilizing a 1:50,000 map. Each phase will consist of at least 5 checkpoints. Remain oriented within 200 meters of the preplanned route. Arrive at the final check point within one minute of planned time.
5. The IUT will set-up and utilize EGI as a back-up NAVAID.

Ordinance: N/A

External Support Requirements: N/A

Certification Stage

Certification Academic Syllabus

1. The IUT shall present, to the instructor, one of the Night Systems classes listed in Paragraph 1 of the IUT Academic Syllabus, as assigned by the NSI, NSFI or MAWTS-1 instructor.
2. The written examination will be administered by an NSI or NSFI. The minimum passing grade for the exam is 80%. In the event of an exam failure, the certification will be terminated and another attempt will not be allowed for at least one month. The exam will be computer generated from the AH-1W NSFI question bank which utilizes the references listed in paragraphs 1&2 of the NSFI IUT academic syllabus.

Certification Flight Syllabus

1. The IUT shall demonstrate the ability to instruct night systems operations during High Light Level (HLL) conditions.
2. The IUT shall plan, brief, lead, debrief and demonstrate the ability to instruct and conduct a HLL Low Level Nav route and FAM flight.

NVD 562 E	1 AH-1W	N
-----------	---------	---

Goal: Evaluate the IUT's ability to instruct NVD combat capable training utilizing NVDs under High Light Level (HLL) conditions as defined by MCO P3500.14G.

Requirements:

1. The IUT shall demonstrate a thorough knowledge of the MAWTS-1 NVD manual and brief/discuss the following.
 - a. The use of NVG's
 - b. Cockpit lighting
 - c. Aircraft external lighting
 - d. Crew coordination
 - e. Comfort level
 - f. Emergency procedures
 - g. NVG failures
 - h. Depth perception
 - i. Scan techniques
 - j. Inadvertent IMC
 - k. Waveoff procedures
 - l. NVG training restrictions/requirements detailed in MCO P3500.14G and MCO P3500.1.
 - m. Visual illusions
2. Conduct low work, pattern work, and simulated emergencies with emphasis on instructional techniques.
3. Review single/dual engine malfunctions, simulated inadvertent IMC on landing, recovery from inadvertent IMC, hover/no hover landings, autorotations, quick stops, and high speed low level autorotations.
4. The IUT shall set-up and utilize EGI as a back-up NAVAID.
5. Emphasize instructional techniques.
6. Flight to be conducted in an NTS AH-1W aircraft.

Ordinance: N/A

External Support Requirements: N/A

RECERTIFICATION REQUIREMENTS

Refresher:

1. Previously certified AH-1W NSFI's or NSI's returning to the AH-1W requiring refresher or modified refresher training as defined in MCO P3500.14G must be recertified by a NSI or MAWTS-1 instructor. Upon recertification, the NSFI designation may be made at the discretion of the squadron commanding officer. The following comprises the recertification course:

- a. The IUT must meet all prerequisites listed previously.
- b. The IUT must successfully complete the NSFI exam, administered by an NSI or MAWTS-1 instructor, with a minimum score of 80%.
- c. The IUT must complete the certification stage, evaluated by an NSI or MAWTS-1 instructor.

Transition:

1. Pilots certified as an NSI or NSFI in an aircraft other than the AH-1W, that transition to the AH-1W as defined in MCO P3500.14G must complete the entire AH-1W NSFI Certification Course.

Conversion:

1. Pilots certified as an NSI or NSFI in an aircraft other than the AH-1W that undergo conversion training to the AH-1W as defined in MCO P3500.14G, must complete the entire AH-1W NSFI Certification Course.

AH-1W DEFENSIVE AIR COMBAT MANEUVERING INSTRUCTOR (DACMI) CERTIFICATION COURSE

Course Objective: To certify an AH-1W pilot as a Defensive Air Combat Maneuvering Instructor (DACMI) capable of safely conducting ground and airborne instruction of the AH-1W air-to-air flight syllabus outlined in MCO P3500.48.

Length: IUT: 15 classroom hours and 2 flight sorties
Cert: 1 test, 1 hour class presentation, and 2 sorties

Notes:

The AH-1W DACMI Course is developed by MAWTS-1. Upon certification by MAWTS-1, the DACMI designation may be made at the discretion of the squadron commanding officer.

Prerequisites:

1. DACM qualified and proficient in accordance with MCO P3500.14G and MCO P3500.48.
2. Designated Weapons Training Officer
3. Designated Section Leader.

IUT Stage

IUT Academic Syllabus:

1. The instructor under training (IUT) shall review and be capable of presenting the following classes:
 - a. ASD Attack Helicopter Threat ASD CLASSIFIED ASP
 - b. MAWTS-1 FW Threat to the MAGTF GENERIC CLASSIFIED ASP
 - c. MAWTS-1 RW Threat to the MAGTF GENERIC CLASSIFIED ASP
 - d. MAWTS-1 Anti-Air Warfare GENERIC CLASSIFIED ASP
 - e. ASD FW Threat ASD CLASSIFIED ASP
 - f. AH-1W DACM Planning Considerations AH-1W ASP
 - g. AH-1W DACM AH-1W ASP

2. The IUT shall review and have proficient working knowledge of the following:
 - a. AH-1W Unclassified and Classified ANTTTP
 - b. OPNAV 3710.7S, Section 5.1.10 (Simulated Air Combat Maneuvering Training Rules)
 - c. MCO P3500.14G (T&R Admin)
 - d. MCO P3500.48 (T&R VOL III)
 - e. AFTTP 3-1
 - f. MAWTS-1 Course Catalog, Chapter 5, DACM(I) Certification Course
3. The academic syllabus will be completed prior to beginning the flight syllabus of any stage.

IUT Flight Syllabus:

1. The squadron shall ensure that the IUT is prepared for certification. The certification stage of the flight syllabus must be complete within six (6) months following the first IUT flight. If six months have elapsed since completion of any IUT flight, that flight must be re-flown prior to completing the final certification flight.
2. A squadron DACMI or MAWTS-1 instructor shall instruct all DACMI IUT flights.
3. IUT flights should be flown on a TACTS range if available.
4. The IUT shall brief, lead, and de-brief all IUT flights.

DACM 580 2AH-1W / 1 RW Aggressor D

Goal: Introduce 1 vs 1 and 2 vs 1 RW Defensive Air Combat Maneuvering and instructional techniques.

Requirements:

1. Brief and discuss DACM safety considerations, crew coordination, communication, spatial and situational awareness.
2. Brief and discuss Energy Maneuverability (EM) and Specific Excess Power (Ps) considerations of adversary and friendly aircraft and related tactical considerations.
3. Brief and discuss capabilities, limitations, envelopes, and weapons systems of possible adversary helicopters and procedures to counter that threat.
4. Brief and discuss operation and utilization of the Aircraft Survivability Equipment (ASE).

5. Brief and discuss air-to-air gunnery procedures, include range estimation, lead requirements, and TOF requirements.
6. Brief and discuss tactical section maneuvering and intra/inter flight communication and lookout doctrine.
7. Brief and discuss section game plan and tactics in relation to adversary aircraft capabilities.
8. Focus will be on section maneuvering, flight leadership, game plan development and control.
9. Emphasis will be on placed on the ability to instruct and meet all requirements for DACM 411, 412 and 413.

Ordinance. TACTS pod/captive AIM-9, TOW plug and expendables.

External Support Requirements: N/A

<u>DACM 581</u>	<u>2 AH-1W / 2 FW Aggressors</u>	<u>D</u>
-----------------	----------------------------------	----------

Goal: Introduce 1 vs 1 and 2 vs 2 FW Defensive Air Combat Maneuvering and instructional techniques.

Requirements:

1. Brief and discuss DACM safety considerations, crew coordination, communication, and spatial and situational awareness.
2. Brief and discuss capabilities, limitations, envelopes and weapons systems of possible adversary fixed wing aircraft and procedures to counter that threat.
3. Brief and discuss operation and utilization of the Aircraft Survivability Equipment (ASE).
4. Brief and discuss fixed wing air-to-air gunnery considerations to include range estimation, lead requirements, and TOF considerations.
5. Brief and discuss tactical maneuvering and intra/inter plane communication and lookout doctrine.
6. Brief and discuss section game plan and tactics in relation to adversary aircraft capabilities.
7. Emphasis will be on section maneuvering, flight leadership, game plan development and control.

8. Emphasis will be placed on the ability to instruct and meet all requirements for DACM 414 and 416.

Ordinance. TACTS pod/captive AIM-9, TOW plug and expendables.

External Support Requirements: N/A

Certification Stage

Certification Academic Syllabus

1. The IUT shall present to a MAWTS-1 instructor, one of the classes listed in paragraph one of the IUT academic syllabus. The MAWTS-1 instructor will determine which class will be presented.
2. A MAWTS-1 instructor will administer a written examination. The minimum passing grade for the exam is 80%. In the event of an exam failure, the certification will be terminated and another attempt will not be allowed for at least one month. The exam will be computer generated from the AH-1W DACMI question bank that utilizes the references listed in paragraphs 1&2 of the DACMI IUT academic syllabus.

Certification Flight Syllabus

1. A MAWTS-1 instructor will instruct all DACMI Certification flights.
2. IUT flights should be flown on a TACTS range if available.
3. The IUT shall plan, brief, lead, debrief and demonstrate the ability to instruct and conduct all DACM flights.

DACM 582E	2 AH-1Ws / 1 RW Aggressor	D
-----------	---------------------------	---

Goal: Evaluate 1 vs 1 and 2 vs 1 RW Defensive Air Combat Maneuvering and instructional techniques.

Requirements:

1. Brief and discuss DACM safety considerations, crew coordination, communication, spatial and situational awareness.
2. Evaluate knowledge of Energy Maneuverability (EM) and Specific Excess Power (Ps) considerations of adversary and friendly aircraft and related tactical considerations.

3. Evaluate knowledge of capabilities, limitations, envelopes, and weapons systems of possible adversary helicopters and procedures to counter that threat.
4. Evaluate PUI knowledge on the operation and utilization of the Aircraft Survivability Equipment (ASE).
5. Evaluate knowledge of air-to-air gunnery procedures, include range estimation, lead requirements, and TOF requirements.
6. Evaluate tactical section maneuvering and intra/inter flight communication and lookout doctrine.
7. Demonstrate the ability to develop a section game plan and tactics in relation to adversary aircraft capabilities.
8. Emphasis will be on placed on the ability to instruct and meet all requirements for the DACM 411, 412, 413 and DACMI IUT 581 sorties.

Ordinance. TACTS pod/captive AIM-9, TOW plug and expendables.

External Support Requirements: N/A

DACM 583E	2 AH-1W / 2 FW Aggressors	D
-----------	---------------------------	---

Goal: Evaluate 1 vs 1 and 2 vs 2 FW Defensive Air Combat Maneuvering and instructional techniques.

Requirements:

1. Brief and discuss DACM safety considerations, crew coordination, communication, spatial and situational awareness.
2. Evaluate knowledge of capabilities, limitations, envelopes and weapons systems of possible adversary fixed wing aircraft and procedures to counter that threat.
3. Evaluate PUI knowledge on the operation and utilization of the Aircraft Survivability Equipment (ASE).
4. Evaluate knowledge of fixed wing air to air gunnery considerations to include range estimation, lead requirements, and TOF considerations.
5. Evaluate tactical maneuvering and intra/inter plane communication and lookout doctrine.
6. Demonstrate the ability to develop a section game plan and tactics in relation to adversary aircraft capabilities.

7. Emphasis will be on placed on the ability to instruct and meet all requirements for the DACM 414, 416 and DACMI IUT 582 sorties.

Ordinance. TACTS pod/captive AIM-9, TOW plug and expendables.

External Support Requirements: N/A

RECERTIFICATION REQUIREMENTS

Refresher (ACMI):

1. Previously certified AH-1W ACMI's returning to the AH-1W requiring refresher or modified refresher training as defined in MCO P3500.14G must be recertified by MAWTS-1. Upon recertification, the DACMI designation may be made at the discretion of the squadron commanding officer. The following comprises the recertification course:
 - a. The IUT must meet all prerequisites listed previously.
 - b. The written examination will be administered by a MAWTS-1 instructor. The minimum passing grade for the exam is 80%. In the event of an exam failure, the certification will be terminated and another attempt will not be allowed for at least one month. The exam will be computer generated from the AH-1W DACMI question bank which utilizes the references listed in paragraph 1&2 of the DACMI IUT academic syllabus.
2. The IUT must complete entire DACMI syllabus.

Refresher (DACMI):

1. Previously certified AH-1W DACMI's returning to the AH-1W requiring refresher or modified refresher training as defined in MCO P3500.14G must be recertified by MAWTS-1. Upon recertification, the DACMI designation may be made at the discretion of the squadron commanding officer. The following comprises the recertification course:
 - a. The IUT must meet all prerequisites listed previously.
 - b. A MAWTS-1 Instructor will administer a written examination. The minimum passing grade for the exam is 80%. In the event of an exam failure, the certification will be terminated and another attempt will not be allowed for at least one month. The exam will be computer generated from the AH-1W DACMI question bank which utilizes the references listed in paragraph 1&2 of the DACMI IUT academic syllabus.

- c. The IUT must complete the 582E and 583E portions of the syllabus. The 580 and 581 sorties may be reflighted at the discretion of the squadron commanding officer, but are not required for recertification.

Transition/Conversion:

1. Pilots certified as an ACMI or DMI in an aircraft other than the AH-1W that transition or convert to the AH-1W as defined in MCO P3500.14G must complete the entire AH-1W DACMI Certification Course previously listed.

AH-1W NIGHT SYSTEMS INSTRUCTOR (NSI) CERTIFICATION COURSE

Course Objective: To certify the AH-1W pilot as a Night Systems Instructor (NSI) capable of safely conducting ground and airborne instruction of the AH-1W night vision device (NVD) flight syllabus outlined in MCO P3500.48.

Length: IUT: 5 classroom hours and 4 sorties.
Cert: 1 hour class presentation, 1 hour NSI test, 2 hour discussion period and 1 sortie.

Notes:

1. Despite reduction in T&R NVG hours for NSQ designation in the sortie-based training structure, a requirement remains for aggregate experience in the aircraft to meet the standards for successful completion of the NSI certification. Experience has shown that pilots with a minimum of 90 hours NVG/40 hours LLL and three months experience as a Section Leader possess the requisite NVG flight experience and the basic foundation of flight leadership to instruct in the fleet NVG environment.
2. The AH-1W NSI Course is developed by MAWTS-1. Upon certification by MAWTS-1, the NSI designation may be made at the discretion of the squadron commanding officer. The IUT portion is designed to be instructed by an NSI or MAWTS-1 instructor.
3. Previously certified and proficient NSFIs may begin the NSI IUT stage at the NVD 591 flight at the discretion of the squadron commanding officer.
4. The academic syllabus shall be completed prior to beginning the flight syllabus in any stage.

Prerequisites:

1. Designated Night Systems Qualified (NSQ) LLL and proficient in accordance with MCO P3500.14G and MCO P3500.48.
2. The following MAWTS-1 ASP classes will be presented to the NSI IUT 90 days prior to the first IUT flight, and shall be documented in the NSI IUT's APR:
 - a. NITE LAB Night Environment NITE LAB ASP
 - b. NITE LAB NVG Adjustment Process NITE LAB ASP
 - c. NITE LAB NVG Misperceptions & Illusions NITE LAB ASP
 - d. NITE LAB FLIR Theory & Introduction NITE LAB ASP
 - e. NITE LAB FLIR Systems and Image Optimization NITE LAB ASP

- f. NITE LAB Operational Considerations and Sensor Integration NITE LAB ASP
- g. NITE LAB NVG Ordnance Considerations NITE LAB ASP
- h. AH-1W Night Targeting System NITE LAB ASP

3. Proficient working knowledge of the following:

- a. AH-1W ANTTP (Unclassified and Classified)
- b. OPNAV 3710.7
- c. MCO P3500.14GG (T&R Admin)
- d. MCO P3500.48 (T&R VOL III)
- e. MCWP 3-23 (OAS)
- f. MCWP 3-23.1 (CAS)
- g. MCWP 3-23.2 (DAS)
- h. MCWP 3-11.4 (TAC FUND OF HELO OPS)
- i. JOINT PUB 3-09.3 (J-CAS)
- j. JOINT PUB 3-09.1 (J-LASER)
- k. MCRP 3-23A (JAAT)
- l. MAWTS-1 COURSE CATALOG
- m. MAWTS-1 NVD MANUAL

4. Designated section leader.

5. Designated FAC(A).

6. Designated Weapons Training Officer (WTO).

IUT Stage

IUT Academic Syllabus:

1. The instructor under training (IUT) shall review and be capable of presenting all NVD classes from the NVD disc of the MAWTS-1 ASP.

IUT Flight Syllabus:

1. The squadron shall ensure that the IUT is prepared for certification. The certification stage of the flight syllabus must be complete within six (6) months following the first IUT flight. If six months have elapsed since completion of any IUT flight, that flight must be reflight prior to completing the certification flight.
2. The IUT shall plan brief, lead, debrief, and demonstrate the ability of instruct and conduct night systems and tactical operations in the HLL and LLL environments.
3. An NSI or MAWTS-1 instructor shall instruct all flights in the IUT stage.

4. Two of the four IUT flights shall be conducted under LLL conditions.
5. To the maximum extent possible, one of the 592, 593, or 594E syllabus sorties shall be a night tactical helicopter escort mission. Emphasis will be on detailed fire support planning/integration of supporting arms and EFL considerations for assault support aircraft.
6. NVD 590 and 591 may be flown during the same sortie at the discretion of the commanding officer.

NVD 590	1 AH-1W	N
---------	---------	---

Goal: Demonstrate the ability to instruct low work, FAM maneuvers, simulated emergencies and shipboard operations utilizing NVDs under HLL or LLL conditions as defined by MCO P3500.14G.

Requirements:

1. Conduct low work, FAM maneuvers, and simulated emergencies with emphasis on instructional technique and execution. Emergency procedures shall include simulated single engine malfunctions, autorotations, quick stops, and high speed low level autorotations.
2. Conduct shipboard operations (deck land qualifications or carrier qualifications) with emphasis on instructional technique and crew coordination. Brief and discuss shipboard flight operations with emphasis on communication procedures, patterns, and aviation operations in the shipboard environment.
3. Brief and discuss NVD emergencies, safety considerations, NVD training restrictions/requirements, ANVIS operation and limitations, depth perception, visual illusions, NVD lighting, crew coordination and inadvertent IMC.
4. Brief and discuss NTS switchology, FLIR operation and employment, laser utilization, and NVG HUD operation and employment.

Ordinance: N/A.

External Support Requirements: N/A

NVD 591	1 AH-1W	N
---------	---------	---

Goal: Demonstrate the ability to instruct NVD navigation utilizing NVD under HLL or LLL conditions as defined by MCO P3500.14G. Emphasis will be on briefing, instructional technique and use of the NTS.

Requirements:

1. Brief and discuss NVD preparation, NVD emergencies/failures, FLIR optimization techniques, LASER employment, NTS failures, and trouble shooting techniques for NVDs and NTS.
2. Brief and discuss NVD lighting techniques, crew coordination, comfort level, map preparation, NVD navigation, and NVD training restrictions.
3. Brief and discuss basic infrared theory, manipulating thermal scene variables, cockpit switchology, and NTS operation.
4. The IUT shall navigate along a predetermined route (50 NM minimum) utilizing 1:250,000 and 1:50,000 scale maps. The IUT shall remain oriented within 200 meters of the preplanned route and arrive at the final checkpoint within one minute of the preplanned time. The IUT shall set-up and utilize EGI as back up NAVAID.

Ordnance: N/A.

External Support Requirements: N/A

NVD 592	2 or more AH-1W	N
---------	-----------------	---

Goal: Demonstrate the ability to instruct tactical formation flight and ordnance delivery in a low threat environment utilizing NVDs under HLL or LLL conditions as defined by MCO P3500.14G.

Requirements:

1. IUT shall fly this sortie in an NTS aircraft.
2. Brief/discuss lead change, inadvertent IMC procedures, formation principles (tactical breakups and rendezvous), evasive actions, use of countermeasures, tactical crew coordination, and EOTDA/TISP mission planning considerations.
3. Brief/discuss NVD ordnance delivery techniques, attack patterns, tactical formations, as well as target acquisition, identification, and engagement using night systems sensors.
4. As dictated by the instructor provided threat scenario, the IUT shall conduct tactical formation flight during a navigation route (minimum 50 NM) utilizing a 1:250,000 and 1:50,000 map. The IUT shall set-up and utilize EGI as a back-up NAVAID.
5. The IUT shall remain oriented within 200 meters and arrive within one minute of

the preplanned time at the final checkpoint. A minimum of two legs as lead and two legs as wingman are required.

6. Based upon the IUT's terminal/target area analysis and the threat scenario, the IUT section leader shall discuss/employ tactics appropriate to the threat and in accordance with current AH-1W Tactical Manual procedures.
7. Emphasis will be placed on flight tactics, NTS employment, section control, and accurate ordnance delivery utilizing hover holds, running fire, diving fire, or a combination thereof, appropriate to the scenario.
8. The IUT will demonstrate NTS tactical employment and conduct a debrief (using the mission video) to the instructor. NVG HUD operations and employment will be performed.
9. At a minimum, the IUT shall plan for the use of Hellfire or TOW missile employment, as well as FW CAS, artillery, or NSFS in the execution of the assigned mission.

Ordnance: 2.75" Rockets, 20mm, Flares.

External Support Requirements: N/A

NVD 593	2 or more AH-1W	N
---------	-----------------	---

Goal: Demonstrate the ability to instruct tactical formation flight and ordnance delivery in a medium to high threat environment utilizing NVDs under LLL conditions as defined by MCO P3500.14G.

Requirements:

1. The IUT shall fly this sortie in an NTS aircraft.
2. Brief/discuss NVD low light level considerations and their impact upon flight ordnance delivery.
3. Brief/discuss navigation techniques, illusions of terrain flight, and tactical crew coordination.
4. Brief/discuss NVD ordnance delivery techniques, as well as target acquisition, identification, and engagement using night systems sensors. Emphasis of brief and flight will be on tactical formations, accurate ordnance delivery, and overall level of planning/execution (objective area analysis).

5. As dictated by the threat scenario, the IUT shall conduct tactical formation flight during a navigation route (minimum 50 nm) utilizing a 1:250,000 and 1:50,000 map. The IUT shall set-up and utilize EGI as a back-up NAVAID.
6. The IUT shall remain oriented within 200 meters and arrive at the final checkpoint within one minute of the preplanned time.
7. The IUT shall emphasize terminal area target analysis and weaponeering, as well as target area mechanics/flow.
8. The IUT shall emphasize flight fire discipline, target assignment and target destruction utilizing hover holds, running fire and/or diving fire, as appropriate to the scenario, in accordance with the AH-1W Tactical Manual.
9. At a minimum, the IUT shall plan for the use of HELLFIRE or TOW missile employment, as well as FW CAS, artillery, or NSFS in the execution of the assigned mission.

Ordinance: 2.75" Rockets, 20mm, CHAFF and/or Flares.

External Support Requirements: N/A

CERTIFICATION STAGE

Certification Academic Syllabus

1. The IUT shall present to a MAWTS-1 instructor, one of the classes listed in paragraph one of the IUT academic syllabus, as determined by the MAWTS-1 instructor, before the certification flight..
2. A MAWTS-1 instructor will administer a written examination. The minimum passing grade for the exam is 80%. In the event of an exam failure, the certification will be terminated and another attempt will not be allowed for at least one month. The exam will be computer generated from the AH-1W NSI question bank which utilizes the references listed in paragraphs 2&3 of the NSI IUT academic syllabus.
3. Prior to the certification flight, The IUT shall complete a two hour discussion period led by a MAWTS-1 instructor.
4. The certification sortie must utilize both TACP and MACCS agencies (Actual or Notional).

Certification Flight syllabus

1. The syllabus consists of one (1) sortie, NVD 594 E.
2. The IUT shall plan, brief, lead, debrief and demonstrate the ability to instruct and conduct night systems and tactical operations in the LLL environment.
3. The certification flight shall be conducted under LLL conditions as defined in MCO P3500.14G.
4. The certification flight must be flown within 6 months of the IUT flights. If six months have elapsed since the completion of the IUT flight, the IUT flight must be reflight prior to completing the certification flight.

NVD 594E	2 or more AH-1W	N
----------	-----------------	---

Goal: Evaluate the IUT's ability to plan, brief, instruct, lead and debrief a tactical flight to include ordnance delivery in either a low, medium, or high threat scenario utilizing NVDs.

Requirements:

1. The IUT shall fly this sortie in an NTS aircraft.
2. Evaluate IUT's knowledge of NVD low light level considerations, current Marine Corps' NVD directives, inadvertent IMC procedures enroute and in the terminal area, formation and aircraft lighting procedures, navigation techniques, illusions of terrain flight, and tactical aircrew coordination.
3. Evaluate IUT's knowledge of AH-1W Night Systems, components, operation and employment in a tactical environment.
4. Evaluate IUT's knowledge of NVD ordnance delivery techniques, attack patterns, tactical formation and movement within the objective area, and target area mechanics/ flow.
5. The IUT shall emphasize terminal area target analysis and weaponeering in the execution of this flight, as well as EOTDA/TISP mission planning considerations.
6. As dictated by the threat scenario, the IUT shall conduct tactical formation flight during a navigation route (50 NM minimum) utilizing a 1:250,000 and 1:50,000 map. The IUT shall remain oriented within 200 meters and arrive within one minute of the preplanned time at the final checkpoint. A minimum of two legs as lead and two legs as wingman are required. The IUT shall set-up and utilize EGI as a back-up NAVAID.

7. Utilizing either actual or simulated CAS, artillery, or naval surface fire support, the IUT will discuss, brief, and employ tactics appropriate to the threat and in accordance with current AH-1W Tactical Manual procedures.
8. Emphasis will be placed upon the IUT's ability to thoroughly instruct tactical formation flight, conduct accurate ordnance delivery, and demonstrate flight leadership skills.
9. The IUT shall plan for the use of either HELLFIRE or TOW missile employment during the execution of the assigned mission.

Ordnance: 2.75" Rockets, 20mm, CHAFF and/or Flares.

External Support Requirements: N/A

RECERTIFICATION REQUIREMENTS

Refresher:

1. Previously certified AH-1W NSIs returning to the AH-1W requiring refresher or modified refresher training as defined in MCO P3500.14G must be recertified by a MAWTS-1 instructor. Upon recertification, the NSI designation may be made at the discretion of the squadron commanding officer. The following comprises the recertification course:
 - a. The IUT must meet all prerequisites listed previously.
 - b. The IUT must successfully complete the NSI exam, administered by a MAWTS-1 instructor, with a minimum score of 80%.
 - c. The IUT must complete the NVD 594E flight, evaluated by a MAWTS-1 instructor.
2. Previously certified Phase I, Phase II, Phase III instructors and NSFIs must complete the entire AH-1W NSI Certification course as listed.

Transition/Conversion:

1. Pilots certified as an NSI in an aircraft other than the AH-1W, that transition or convert to the AH-1W as defined in MCO P3500.14G, must complete the entire AH-1W NSI Certification Course.

AH-1W TRAINING SYLLABUS

EVENT	DATE	INSTRUCTOR
COMBAT READY		
DECK LANDING QUALIFICATION		
SDLQ 200		
DLQ 201		
DLQ 202		
TERRAIN FLIGHT/NAVIGATION		
ASDTERRAIN FLIGHT		
ASD TACT IN THE NIGHT ENVIR		
ASD TACTICAL AIRCREW CORD		
TNAV 210		
TNAV 211		
ASD IR SAM THREAT		
RECONNAISSANCE		
MAWTS-1 EOTDA		
MAWTS-1 AIR RECON		
AH-1W NIGHT TARGETING		
ALE-39 CBT		
REC 230		
REC 231		
ASD AAA THREAT		
SPECIFIC WEAPONS DELIVERY		
AH-1W WEAPONNEERING		
AH-1W TOW		
AH-1W AGM-114 HELLFIRE		
AH-1W ROCKETS		
AH-1W 20MM		
SSWD-240		
SWD-241		
SWD-242		
SSWD-243		
SWD-244		
SWD-245		
ESCORT		
ASD TAC BRF & DEBRF		
ASD ESCORT TACTICS		
ASD EVASIVE MANEUVERS		
AH-1W AIM-9		
ASD CONVOY ESCORT		
ESC-250		
ESC-251		
ESC-252		
OFFENSIVE AIR SUPPORT		
MAWTS-1 MAGTF FSCM		
AH-1W RW OAS		
SOAS-260		
OAS-261		
OAS-262		
ASD OBJ AREA PLAN AND BRF.		
GENERAL SUPPORT ACADEMICS		
ASD PFPS		
AH-1W HAVEQUICK/SINCGARS		
AH-1W EGI OPERATIONS		
MAWTS-1 INTEL SPPT TO MSN		
MAWTS-1 REC THREAT T		
AH-1W FARP/RGR OPS		

EVENT	DATE	INSTRUCTOR
COMBAT QUALIFICATION		
ELECTRONIC WARFARE		
AH-1W ASE		
SEW-300		
EW-301		
MAWTS-1 EA-6B AND MAGTF OPS		
ASD RADAR SAM THREAT		
ADVANCED NIGHT SYSTEM QUALIFICATION		
SANSQ-310		
ANSQ-311		
ANSQ-312		
ANSQ-313		
ANSQ-314		
ANSQ-315		
MAWTS-1 TRAP		
ASD RAPID RESPONSE PLANNING		
OFFENSIVE AIR SUPPORT		
MAWTS-1 ROE & LAW OF WAR		
OAS-320		
OAS-321		
OAS-322		
OAS-323		
OAS-324		
ASD FIXED WING THREAT		
CARRIER QUALIFICATION		
DLQ-330		
DLQ-331		
FORWARD AIR CONTROLLER (AIRBORNE)		
FAC(A) CALL FOR FIRE		
FAC(A) NSFS CALL FOR FIRE		
FAC(A) BASICS		
FAC(A) HELO LOW THREAT TTPS		
FAC(A) HELO MED/HI THREAT TTP		
MAWTS-1 TGT & F.S. PLAN		
FAC-340		
FAC-341		
FAC-342		
FAC-343		
MAWTS-1 OAS PGM		
FAC(A) FW/RW INTEGRATION		
FAC(A) PLANNING & PREPARATION		
FAC(A) & TAC(A) EMPLOYMENT		
FAC(A) HELO NIGHT TTP		
GENERAL SUPPORT ACADEMICS		
MAWTS-1 ELECTRONIC WARFARE		
MAWTS-1 CONTROL OF ACFT & MSLS		
MAWTS-1 MCPP		
ASD LASER THREAT		
ASD ATTACK HELO THREAT		
ASD HELO ASSLT KEY PLAYERS		
FULL-COMBAT QUALIFICATION		
OFFENSIVE AIR SUPPORT		
MOUT		
URBAN CAS		
OAS-400		
OAS-401		
OAS-402		
OAS-403		
OAS-404 / 405		

NAME: _____

SSN: _____

AH-1W TRAINING SYLLABUS

[illegible]

NAME: _____

[illegible]

SSN:

UNCLASSIFIED//For Official Use Only
AH-1W TRAINING SYLLABUS

AIR MISSION COMMANDER CHECK		
DESG-679		
BASIC INSTRUCTOR PILOT		
IDSG-680		
TERF I		
IDSG-681		
WTO		
IDSG-682		
FAC(A) I		
IDSG-683		
DACM I		
IDSG-688		
NSF I		
IDSG-694		
NSI		
IDSG-696		
WTI		
IDSG-699		
TOW MSL SHOOT		
SOTC-710		
HELLFIRE MSL SHOOT		
SOTC-711		
SIDEWINDER MSL SHOOT		
SOTC-712		

NAME: _____

SSN: _____